



TRADE

PERSPECTIVE PAPER

***Benefits and Costs of the Trade Targets
for the Post-2015 Development Agenda***

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Post-2015 Consensus

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INTRODUCTION	1
OBSERVATIONS ON THE PERSPECTIVE PAPER	1
SERVICES IN THE WORLD ECONOMY.....	3
THE COMPARATIVE NEGLECT OF SERVICES	3
<i>Classical Economic Thought</i>	3
<i>The Cost of Disease</i>	4
<i>Measurement Challenges</i>	4
THE RISE OF SERVICES IN THE WORLD ECONOMY	5
THE CONTRIBUTION OF SERVICES TO PRODUCTIVITY GROWTH	5
LOOKING AT TRADE THROUGH THE VALUE-ADDED LENS.....	6
SERVICES AND VALUE-ADDED TRADE	7
SERVICES AND POLICY	8
SERVICES, DEVELOPMENT AND DIVERSIFICATION	9
CONCLUSIONS	10
HOW COULD MDG TARGETS BE ESTABLISHED FOR SERVICES TRADE?	10
REFERENCES.....	12

Introduction

This Perspective Paper discusses Kym Anderson's Assessment Paper entitled Trade Barrier Reform Opportunities. Starting with some observations on Anderson's paper, this note goes on to consider services in the world economy and trade. The discussion is based on the observation that the Anderson paper pays limited attention to services, concentrating rather on the manufacturing and agriculture sectors. Yet it is becoming increasingly apparent that economists and policymakers have until recently tended to underestimate the role of services in economic activity. At the same time, services account for increasing shares of total value-added in production and trade as well as of employment in virtually all economies. Demand for services has been shown to increase as income grows, and with marked changes in the structure and organization of production¹.

Observations on the Perspective Paper

Overall, Anderson's paper provides an excellent and comprehensive analytical review of contemporary trade policy issues in manufacturing and agriculture, and of the case for policy reform. He addresses existing trade barriers and asks why they persist. The paper considers the case for lowering them with reference to well-established propositions about the gains from trade (comparative advantage, imperfect competition and economies of scale, productivity-enhancing trade opening) in both static and dynamic settings.

The empirical part of the Assessment Paper reviews a range of computable general equilibrium (CGE) simulations to estimate gains from trade opening. A number of these are regionally concentrated and do not capture a global picture. The author acknowledges some of the weakness of the CGE approach, while also pointing out that the methodology has greatly improved over the years. Depending on the matter at issue, CGE modeling is frequently a better alternative to other approaches to quantification, such as partial equilibrium simulation. Anderson also cites work² that recognizes the limiting influence of certain model assumptions and seeks to incorporate consideration of such factors as product variety, less than full employment, imperfect competition, economies of scale, and individual firm-level responses to a change. Models that move away from comparative static analytics to allow for the time path of change to affect outcomes (dynamic models) are also more realistic. As Anderson and Winters (2009) point out in earlier work undertaken for the Copenhagen Consensus, more realistic model specifications also yield bigger simulation results. These can range up to five times as much as simpler specifications in terms of the welfare benefits of trade opening.

Credibility in the use of these techniques ultimately depends on making explicit the underlying assumptions contained in the simulations and on not claiming too much for the robustness of the results. One revealing fact about these simulations is that ex post verification is extraordinarily difficult and of questionable validity because of the range of factors that in the real world drive an observed outcome, as opposed to a predicted outcome rendered tractable in estimation by simplifying assumptions.

¹ See, for example, Francois and Reinert (1996).

² See, for example, Rutherford and Tarr (2002)

Simulation techniques are analytically richer and more insightful when they compare different outcomes resulting from variations in modelling assumptions or scenarios. When the simulations are immodestly presented as single point predictions of cause and effect between future outcomes and government policy, they diminish the credibility of the analytical technique. Policymakers need to be convinced by evidence-based reasoning rather than purely numerical output derived from unfamiliar procedures.

The above observations are not a criticism of Anderson's Assessment Paper, which takes considerable care to highlight the theoretical underpinnings of the case for greater trade openness, nor are they intended to discourage reliance on quantification as a guide to policy action. Rather, they appeal to moderation in claiming certainty in a world of considerable uncertainty, especially about the future. These paragraphs are also motivated by the conviction that at least a part of the relative neglect of services in the academic and policy literature³ is fed by significant quantification challenges in a world of customized production and intangible products.

Not everything that is unquantifiable is unimportant, and pretending to quantify the unquantifiable amounts to guesswork or ideological sophistry, especially in the eyes of the uninitiated. What is the appropriate balance within the Copenhagen Consensus between quantification and qualitative reasoning? Both approaches face credibility challenges if they are poorly executed, or fail to marshal available evidence convincingly and with due deference to inherent limitations. The challenge lies in settling upon a harmonious and synergistic balance between the two, and in being as transparent as possible about underlying assumptions and methodologies. A failure to do this drives a credibility wedge between scholars and decision-makers.

Much CGE work over the years has simulated the consequences of trade policy choices by governments, with virtually all simulation results demonstrating gains from trade openness, although some of the simulations show particularly small or even negative gains for some countries. The latter are usually attributed to model specifications relating to the loss of trade preferences or a lack of liberalizing action on the part of the country concerned. The model specifications may not be picking up other factors that inhibit the realization of benefits from trade openness.⁴ As Rodrik (2007) points out in an important book on this subject, gains from good policy do not call for a predefined formula – different approaches can lead to similar outcomes. Moreover, singling out one policy, such as trade policy, tends to ignore other factors that are crucial to outcomes. The state of the macro-economy, the policies of other countries, the domestic policy environment, and the institutional setting will all play a part in determining whether good trade policy can work its magic.

³ The relative sparseness of work on services compared to that on goods is discussed further below.

⁴ If the specifications underlying the model are such as to ignore these factors, the low welfare numbers are obviously nothing to do with them.

As tariffs have come down on most international trade to the point of being relatively unimportant, non-tariff measures (NTMs) are frequently the cutting edge of policy intervention (WTO, 2012). Non-tariff measures often evolve into non-tariff barriers (NTBs), and these have become the principal driver of many distortions in different markets.

Services in the World Economy

Services make up a dominant share of income in most economies. As Table 1 shows, the global share of GDP accounted for by services was 70 per cent. On average, the lower a country's income as measured by GDP, the less will services represent of national economic activity. Unsurprisingly, the prominence of services as a source of income translates into jobs. In OECD countries, total civilian employment in 2011 amounted to 73 per cent of all jobs (OECD 2014a).

Table 1: Services as a share of GDP (%)

	2000	2012
World	67	70
Low income	46	49
Middle income	51	54
Low and middle income	50	54
High income	70	74

Source: World Development Indicators, World Bank

The comparative neglect of services

Classical Economic Thought

Considering what the statistics tell us about the importance of services, it may seem odd that they have not received greater analytical attention, nor in many cases policy attention. One reason for this is the long shadow cast by classical economic thought. Adam Smith famously wrote in *The Wealth of Nations* that '[T]he labour of a menial servant...adds to the value of nothing...services generally perish in the very instant of their performance, and seldom leave any trace or value behind' (Smith 1776). The reason services were relegated zero value status turned essentially on their non-storability. Value was equated to the accumulation of capital, which required the production of something physical and storable. This thinking persisted in Ricardian and Marxian thought, and arguably also influenced neo-classical analysis. Services doubtless played a more minor role in seventeenth and eighteenth century economies, and their non-storability would have been a dominant feature, but things are very different today.

The Cost of Disease

An earlier strain in the literature typified by Baumol and Bowen (1966), Baumol (1967), and Fuchs (1968) raised concerns about the consequences of what was perceived as an innate lack of productivity in services industries. What became known as Baumol's Cost Disease was predicated on the proposition that unit costs would continually rise in services industries, as services were technically and technologically incapable of becoming more productive. Wages would rise because industries that generated productivity increases would push them up and the lack of infinite labour supply would mean that wages across the economy would rise. The market would not drive out these industries because they were regarded as socially essential (and often government-funded or assisted) and could not be substituted by more efficient operations. The rise in the share of services in GDP – considered in no small part to be the consequence of low productivity in services – meant that economies like that of the United States were facing an escalating problem of crimped productivity-led growth.

Baumol (1988, 1993) refined this view in later years, essentially on the basis of more careful distinctions among services, which are characterized by considerable heterogeneity. Many other contributions have increased contemporary understanding of the role of services in the economy (Francois and Hoekman, 2010)⁵.

Measurement Challenges

In more recent times some of the neglect of services may have resulted from a range of other issues, mostly to do with measurability. When something is difficult or impossible to measure, it is more likely to be ignored or re-labeled as something else easier to measure. Services are typically differentiated from goods in four ways. The first, which troubled the classical economists, is a lack of storability. This means that production and consumption must be simultaneous. The second is the impossibility of transporting them or providing them at a distance, requiring that the producer and consumer must be in the same place. The third is that many services are customized and not commoditized. This variation in the characteristics of units of output makes it difficult to establish reliable product prices, and to settle on an agreed nomenclature for service products. Finally, services are intangible.

The first two of the above characteristics – limits to storability and transportability – have been rendered far less important than they used to be by technological advances in ICT. The third – customization – is a characteristic that may also apply to some categories of goods. Only the final element – intangibility – is unchangeable over time and truly distinguishes goods from services.

The linkages between goods and services in the global value chain world, particularly through the bundling of offerings by firms, does raise a question about the wisdom of trying too hard to separate services and goods analytically. The argument for some sort of fusion is even stronger when it comes to separate international rules regimes for goods and

⁵ The 2010 contribution by Francois and Hoekman in the Journal of Economic Literature on the role of services in trade remains the most comprehensive analysis available of the evolution of services in global economic activity.

services. None of this lessens the persistent challenges of measuring the contribution of services to economies.

Another significant source of neglect with respect to the services economy has only just begun to be rectified. This relates to the measurement of services in trade, and will be taken up below.

The Rise of Services in the World Economy

Services do not just dominate in the global economy, they are becoming more dominant. Table 1 above shows the rise of services shares in GDP between 2000 and 2012. Similarly, the 2000 figure for the share of OECD jobs in services was 66 per cent compared to the 73 per cent reported above for 2011.

Several factors account for growing shares of services in global economic activity (Francois and Hoekman 2010). As incomes have risen, the composition of consumption has shifted in the direction of services. On the supply side, the increased internationalization of production has intensified reliance on services. Similar structural and compositional shifts have taken place in consumption, both in terms of its internationalization and changed consumer preferences enabled by technological advances in information and communications technology, including the Internet.

In contrast to goods, services are multi-functional. They are not merely a source of value like any other product. They also supply inputs to virtually every economic activity. Producer services such as transport, telecommunications, financial services, distribution, professional services and business services are essential to the entire operation of an economy. Services are also the 'glue' that enables economic linkages and networks to operate both nationally and internationally. Without them, there would be a lot less market integration and a lot more market segmentation.

The Contribution of Services to Productivity Growth

Contrary to the earlier view of services as the poor relation of the economy in terms of offering scope for productivity growth, recent work has effectively challenged this view. The traditional measure of productivity relates output to the input of labour. With this measure, the productivity of labour may increase through augmented capital, economies of scale, new technology, and greater labour or organizational efficiency.

Total factor productivity measures place greater emphasis on the contribution of factors besides capital and labour as contributors to growth, facilitating a closer examination of the role of services in the economy. Recent literature provides numerous examples of services-related productivity growth (Triplett and Bosworth, 2004; Francois and Hoekman, 2010, Gallouj and Djellel, 2010, and USITC, 2013). Some studies show that in certain economies in recent years, services have been the leading source of additions to productivity and growth. Services productivity may simply be the consequence of process innovation, or it may be technology-assisted and perhaps combined with goods in production.

Looking at Trade Through the Value-Added Lens

The rise of technology-enabled international value chains has changed patterns and the composition of trade in important ways in recent decades. Up to two-thirds of trade now consists of intermediate goods, with many of those products going into processing trade and becoming part of the exports of the importing country. This argues strongly for measuring trade in value-added terms and banishing the double-counting implicit in gross trade flow data. Conventional measurement of trade flows has poorly served our appreciation of the true composition of bilateral trade flows, and misleading analysis based on the wrong data persists.

Work undertaken in recent years has raised awareness of how badly traditional practice has misrepresented the true nature and provenance of trade. Prior to the development of new data sets using international global input-output matrices, notably by the University of Groningen (Timmer, 2012), the OECD and the WTO (OECD-WTO, 2012), all trade statistics were presented in gross value terms.⁶ This is in contrast to GDP, which has always been measured in value-added terms, properly capturing the sources of value. The result of measuring trade as gross value was to generate double counting that became larger the greater the import-intensity of a country's exports. The value-added measure avoids this problem because it identifies what each country along a value chain actually adds.

Several important consequences flow from measuring trade in value-added. First, bilateral trade balances can look quite different. Second, the technology content of particular trade flows may also vary significantly from what the gross trade values might suggest. Third, the value-added numbers provide a much more accurate picture of the nature of trade dependency among countries, and therefore of the consequences attributable to particular trade flows and the implications of policy actions.

Several micro-level studies have shed light on how different the value-added story can be in contrast to the impression created by gross flows. Amongst best known of these are the studies on the iPod (Dedrick et al. 2009), the iPhone (Xing and Detert, 2010) and the iPad (Linden et al., 2011). In each case, a high-technology export from China only contains a small fraction of China-generated value, with the rest coming from other countries inside and outside the Asia region. In the case of an iPhone4, the Joint OECD-WTO Note (2012) reports calculations that apportion shares of inputs to Taiwan (11 per cent), Germany (9%), Korea (42%), United States (12 per cent) and other countries (26 per cent). Yet with gross trade flows, all of this value would have been attributed to China as the last country of export. A similar study has been undertaken of the Nokia95 by Ali-Yrkkö et al. (2011), telling much the same story. The Fung Global Institute undertook a study of a coat putatively made in China that retailed in the United States for US\$425 (Low, 2013). In reality, only 5 per cent of that value originated in China, a further 9 per cent other Asian countries, and all the rest in the United States itself, largely from upstream and downstream services inputs.

⁶ The earliest scholarly studies of trade measured in value-added terms (e.g. Daudin *et al.* 2009; Johnson and Noguera 2010; and Koopman *et al.* 2011) use Global Trade Analysis Project (GTAP) data generated by the GTAP consortium based at Purdue University.

At a more aggregated level, a study by IDE-JETRO and the WTO (2011) showed, for example, that the 2005 US trade deficit with China is over-stated by more than 50 per cent when measured as a gross flow instead of in value-added terms adjusted for processing trade. The real origin of the US trade deficit includes ‘indirect’ exports to the United States from economies such as Japan, Korea, and the EU that are embedded in China’s exports to that country. Exports from the United States to China of intermediate goods and services are no doubt also part of this story.

Services and Value-Added Trade

The starkest change in perceptions that the introduction of value-added trade measures has wrought relates to the role of services in international trade. A dramatically different picture emerges. The services share of trade jumps from around 23 per cent as measured by balance-of-payments statistics to nearly 50 per cent based on the input-output matrices underlying the value-added calculations.⁷ The latter is still an underestimate because many services enter goods production and are not separately broken out because of the highly aggregated character of the global input-output matrix. They are therefore ‘embedded’ in goods and therefore defined as such. Moreover, services that enter goods production on a non-arm’s-length basis (in-house supply) are not usually identified even in GDP statistics, let alone in trade numbers.

A growing body of work emphasizes how much more we need to understand about the role of services in global value chains. Studies by Sweden’s Kommerskollegium (2010a, 2010b, 2012), for example, have introduced the notion of ‘servicification’, a process whereby manufacturing activities have become increasingly service-dependent. Other contributions in a similar vein refer to ‘servicization’ and ‘service science’.⁸ The OECD has also contributed to a deeper understanding of how knowledge-based capital is an increasingly important invisible asset that contributes to growth (OECD, 2011 and 2012).

This all means that services are traded and tradable to a far greater degree than is generally realized, not least by policymakers. Evidence is mounting that services are much more prominent, if not dominant, in international trade – a reality that was not appreciated before the shift towards measuring trade in value-added terms. Research on individual value chains being undertaken at the Fung Global Institute suggest that the aggregated data underlying input-output matrices still understates the services share of trade to a significant degree.

The research is still at a preliminary stage but it points to a services share in total trade of more than 50 per cent, ranging up to 75 per cent and above in individual manufacturing value chains. A similar story emerges from services value chains, where a significant array of different services are required to produce the core output of the value chain in question. If these patterns are born out in multiple case studies of highly disaggregated value chains, the share of services in trade could be similar to their share in GDP.

⁷ This figure was calculated by the WTO Secretariat from OECD-WTO value added data.

⁸ For a brief review of this thread of work, see Low (2013).

In a case study of a simple value chain for a loaf of bread (Cheung et. al), 72 per cent of the value of the loaf is attributable to services entering the value chain. The life of the loaf of bread was traced in the case study from the importation and local procurement of inputs that are conveyed to a factory in China's Guangdong province. Following the manufacture of the loaf it is transported to a warehouse in Kowloon, from where it is then conveyed to retail outlets in the rest of Hong Kong. No fewer than 30 service inputs were required in this value chain.

The analysis examined the interface between government policy and the operation of the value chain, with particular reference to the services inputs. Over one-tenth of direct production costs were attributable to the administration of policies, including in respect of border administration, and health safety and environmental regulation. The case study also threw some light on issues surrounding outsourcing and bundling.

Over half of the 30 services were fully or partially outsourced to third parties. Among the reasons for outsourcing are cost minimization, arising from considerations including direct factor and material costs, economies of scale and scope, and a lack of in-house knowledge or skills of some kind. Other factors may be strategic or motivated by regulatory requirements. Reasons for not outsourcing may also be strategic, including for the protection of knowledge and intellectual property. As discussed below, a deeper understanding of the dynamics of outsourcing can have important developmental implications.

An appreciation of bundling is also important in drawing an analytical picture of global value chains. In the scholarly literature the bundling phenomenon has been referred to as trade in tasks (Grossman and Rossi-Hansburg, 2008) to capture essential features of internationalized production and consumption. Bundling can be efficiency-driven, a source of productivity-enhancing innovation, and a means of product differentiation and market segmentation. A good deal of bundling of inputs outsourced by the lead firm was detected in the bread case study. One example of this is transport, part of which was outsourced in China for the cross-border trip to Hong Kong. Included in the Chinese transport company's bundled offering are operating personal, fuel, vehicle insurance, and repairs and maintenance of vehicles. By virtue of the transport service offered to the lead firm, all the above services are also traded. At least one of them – repairs and maintenance – could only be traded in this manner⁹ because it is bundled.

Services and Policy

Services are more regulation-intensive than goods, yet we know much less about how policies affect the wide range of service activities in an economy. Inefficient services supply or restricted access to services can seriously hobble economies. Protectionism is rife in many service sectors and we do not have a real handle on this. The World Bank (World Bank, 2012) and OECD (OECD 2014b) efforts to produce indices of protection in service

⁹ Under the General Agreement on Trade in Services (GATS), this service could have also been defined as traded if it was provided by a foreign services enterprise (Mode 3) or a foreign service supplier (Mode 4) on Chinese soil.

sectors have made a valuable contribution in raising awareness of this reality, but a lot more work is needed.

Non-tariff measures (NTMs) become non-tariff barriers (NTBs) when they are poorly conceived, designed or applied, including but not only for intentionally protectionist purposes. Both NTMs and NTBs are sometimes hard to identify, and almost always hard to measure in terms of their trade effects. Anderson's paper does not tell us how far beyond tariffs and subsidies the reported simulations have gone in capturing these costs.

Non-tariff measures these days are usually regulations rather than explicit quantitative restrictions on trade. When they take the latter form, they are likely to require outright prohibitions on safety, health or moral grounds. A safe assumption about many NTMs is that in principle at least they respond to market failures or externalities that create public policy needs associated with protecting health, safety, life, and the environment. If they do this efficiently – at least cost consistent with the public policy objective – these interventions can be seen as positive social value added. But when NTMs turn into NTBs on account of poor conception or design, inefficient administration, protectionism or governance failures, they subtract value and may even be net negative in welfare terms, notwithstanding the attainment of a socially desirable goal. Since services are typically more regulation-intensive than goods, the challenges of assessing the welfare effects of policy are likely to be even harder for services.

Services, Development and Diversification

The developmental implications of the emergence of GVCs have reinvigorated the debate about the role of government in economies as they seek to diversify away from agriculture and extractive industries through industrialization. A lacuna in this discussion is the paucity of debate about where services fit in.¹⁰ Given the predominance of services in economic activity and the nature and range of service activities, they offer valuable opportunities for diversification and development in emerging economies. The importance of the omission is highlighted by the fact that small and medium-sized enterprises (SMEs) in developing and emerging economies account for anything between about one half (Stein et al., 2010) to two-thirds or more (Berrios and Pilgrim, 2013) of jobs, and a large share of these SMEs are seemingly service providers. Normah Mohd (2007) estimates that 90 per cent of Malaysian SMEs are service providers. In Hong Kong the number is 94 per cent (Government of Hong Kong Special Administrative Region, 2014).

Much of the analytical literature on GVCs and development nevertheless provides a framework for thinking about the role of services. Much of the work focuses on the notion of upgrading in relation to GVC participation and draws a distinction between social and economic upgrading (Barrientos et al., 2011). Social upgrading occurs within production units and leads to improvements in wages, health and safety, social insurance, rights of workers, and so on. Economic upgrading refers to the nature of engagement in relation to different activities, skill levels and technology. Economic upgrading can occur through

¹⁰ One exception to this is Gereffi and Fernandez-Stark (2010).

changes in production processes, products, or functions along a single value chain, and through participation in different value chains.

Social upgrading and economic upgrading are related, and they do not necessarily move in the same direction. Social upgrading may not accompany economic upgrading, as they are driven by different factors. Higher skilled employment, for example, may not be automatically accompanied by better workplace conditions. Jobs may shift towards less secure employment conditions. Policy can play a role here. Additionally, the capacity to upgrade may depend on the markets firms are serving. Entry barriers and required standards may be lower for servicing some markets (Kaplinsky et al., 2011; Staritz et. al., 2011).

The debate on how governments should position themselves to foster upgrading draws on some old discussions about industrial policy, but adds elements relating to the potential for different opportunities in a GVC world (Gereffi and Sturgeon, 2013; Low and Tijaja, 2013). A case might be made for industry- or firm-specific government interventions that go beyond a broad-based focus on basic infrastructural, social and governance conditions. Partnerships among governments, firms and civil society can support otherwise elusive upgrading opportunities (Barrientos et al., 2011). Whatever the policy emphasis, the imperative of competitiveness will play a fundamental part in shaping growth and development outcomes from GVC participation.

Conclusions

This Perspective Paper has focused almost entirely on services, and is intended to supplement Kym Anderson's comprehensive analysis of trade in manufactures and agriculture in his Assessment Paper. Services have become a major force in production and trade globally, accounting also for a substantial share of global employment. Despite earlier neglect of services, and the view that services was a laggard sector and drag on the economy, a greater appreciation is now apparent of the capacity of services to contribute to productivity and growth. Moreover, services play multiple roles in the economy.

A major problem for analysis and policy arises from acute data deficiencies and measurement challenges. It is for this reason that policy analyses and discussion still sometimes pays services scant attention. Results and policy conclusions that emerge from such work can be misleading. In addition, services are significantly affected by regulation as well as price interventions and the former are hard to identify straightforwardly and to assess in terms of impact.

How Could MDG Targets be Established for Services Trade?

Growing attention is being given to services and how to analyze them better. This can be seen from a growing literature and concerted efforts to build datasets on services trade flows, as well as on policies and their effects. A question arises as to whether the policy proxies used for benefit/cost analyses of scenarios are adequate if they do not explicitly factor services data into the analysis. At the same time is not straightforward to find convincing ways of incorporating services in a comparatively data-starved environment.

One option may be to consider some composite of the World Bank's and OECD's services policy databases (World Bank, 2012; OECD 2014b). This would identify key indicators of policies that could be adjusted or formulated to enhance opportunities for upgrading and fuller participation by suppliers from developing and emerging economies in global value chains. This task would have to be undertaken by those who constructed the databases. Other than this, a possibility might be to develop indicators and targets for increasing data quality in ways that would facilitate more adequate analysis of opportunities for enhanced participation in services activities in the global economy.

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This paper was written by Patrick Low, Vice President for Research and Senior Fellow at Fung Global Institute, Hong Kong. The project brings together more than 50 top economists, NGOs, international agencies and businesses to identify the goals with the greatest benefit-to-cost ratio for the next set of UN development goals.

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